

What is claimed is:

1. A method of transferring data comprising the following steps:
  - a) transmitting, at a rate of transmission that may fall anywhere within at least one continuous range, data that includes synchronization bits and bits conveying other information; and,
    - b) receiving said transmitted data by the following steps:
      - i) ascertaining the rate of transmission of said synchronization bits; and,
      - ii) receiving, at the ascertained rate of transmission, said bits representing other information; wherein said step of receiving does not require said rate of transmission to be selected from one or a few substantially fixed value(s) within said range which value(s) are determined prior to said step of receiving.
  2. The method of claim 1, wherein said rate of transmission may vary during said step of transmitting.
  3. The method of claim 2, further comprising the steps of:
    - a) establishing a system that includes a bus having encountered transmission conditions limiting the possible rate of transmission on said system, which conditions are not precisely known in advance of establishing said

system but are encountered after establishment of the system, wherein said steps of transmitting and receiving are performed over said system; and,

- b) altering said rate of transmission if necessary so as to equal a rate that is within the limit of the possible rate of transmission under said encountered transmission conditions.

4. The method of claim 3, wherein said step of altering further includes the step of optimizing said rate of transmission under said encountered transmission conditions.

5. The method of claim 3, wherein said bus is a 2-line serial bus.

6. The method of claim 1, wherein said step of transmitting is performed by a master device, and said step of receiving is performed by a slave device.

7. The method of claim 6, further comprising the step of transmitting other data back from said slave device to said master device at a rate of transmission determined in step b).

8. The method of claim 7, wherein commands are transmitted in step a) and said other data are at least partly responsive to said commands.
9. The method of claim 6, wherein said slave device is a detonator and said master device is a blasting machine.
10. The method of claim 1, wherein said data includes one or more packets each comprising more than one word.
11. The method of claim 10, wherein each said packet includes two or more words containing synchronization bits.
12. The method of claim 11, wherein within at least one word containing synchronization bits, said synchronization bits precede said bits conveying other information.
13. A device capable of receiving data transmitted at a rate that may fall anywhere within at least one continuous range, said data containing synchronization bits and bits conveying other information, said device including electronic circuitry that includes means for ascertaining the rate of transmission of said synchronization bits and means for receiving subsequently transmitted bits at the ascertained rate of transmission, wherein said rate of transmission is not required to be selected *a priori* from

one or a few substantially fixed value(s) within said range.

14. The device of claim 13, wherein said device is a slave device, and said data is from a master device.
15. The device of claim 14, wherein said device is configured and/or programmed to transmit other data back to said master device at the ascertained rate of transmission.
16. The device of claim 15, wherein said slave device is a detonator and said master device is a blasting machine.
17. A system for transferring data comprising:
  - a) a bus;
  - b) at least one master device including means for connection to said bus, said master device including means for transmitting, at a rate that may fall anywhere within at least one continuous range, data containing synchronization bits and bits conveying other information; and,
  - c) at least one slave device including means for connection to said bus, said slave device including means for ascertaining the rate of transmission of said synchronization bits and means for receiving said bits

conveying information at the ascertained rate of transmission;

wherein said rate of transmission is not required to be selected *a priori* from one or a few substantially fixed value(s) within said range.

18. The system of claim 17, wherein said bus has encountered transmission conditions that limit the possible rate of transmission on the system, which conditions are not precisely known in advance of establishing the system but are encountered after establishment of the system, and wherein said master device is capable of varying the rate of its transmission during transmission if necessary so as to equal a rate that is within the limit of possible rate of transmission under said encountered transmission conditions.
19. The system of claim 18, wherein said slave device is configured and/or programmed to transmit other data back to said master device at the ascertained rate of transmission.
20. The system of claim 19, wherein said slave device is a detonator and said master device is a blasting machine.